

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act as amended, (33 U.S.C. §§1251 et seq.; the "CWA"), and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§26-53),

Groton School

is authorized to discharge from the facility located at

**Groton School Wastewater Treatment Plant
Farmer's Row
Groton, Massachusetts 01450**

to receiving water named

Nashua River

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on the date of signature.

This permit and the authorization to discharge expire at midnight, August 31, 2012

This permit supersedes the permit issued on June 21, 2002.

This permit consists of 11 pages in Part I including effluent limitations and monitoring requirements, Part II including General Conditions and Definitions, Attachment A-Whole Effluent Toxicity Protocol, and Sludge Guidance Document.

Signed this 27th day of September, 2007

/S/ SIGNATURE ON FILE

Director
Office of Ecosystem Protection
Environmental Protection Agency
Boston, MA

Director
Division of Watershed Management
Department of Environmental Protection
Commonwealth of Massachusetts
Boston, MA

PART I

A.1. During the period beginning on the effective date and lasting through expiration, the permittee is authorized to discharge treated effluent from outfall serial number **001** to the Nashua River. Such discharges shall be limited and monitored as specified below.

<u>EFFLUENT CHARACTERISTIC</u>		<u>EFFLUENT LIMITS</u>			<u>MONITORING REQUIREMENTS</u> ³		
PARAMETER	<u>AVERAGE MONTHLY</u>	<u>AVERAGE WEEKLY</u>	<u>AVERAGE MONTHLY</u>	<u>AVERAGE WEEKLY</u>	<u>MAXIMUM DAILY</u>	<u>MEASUREMENT FREQUENCY</u>	<u>SAMPLE TYPE</u>
FLOW ²	*****	*****	0.07 MGD	*****	Report MGD	CONTINUOUS	RECORDER
FLOW ²	*****	*****	Report MGD	*****	*****	CONTINUOUS	RECORDER
BOD ₅	18 lbs/Day 8 kgs/Day	26 lbs/Day 12 kgs/Day	30 mg/l	45 mg/l	Report mg/l	1/WEEK	24-HOUR ⁵ COMPOSITE
TSS	18 lbs/Day 8 kgs/Day	26 lbs/Day 12 kgs/Day	30 mg/l	45 mg/l	Report mg/l	1/WEEK	24-HOUR ⁵ COMPOSITE
pH RANGE ¹	6.0 - 8.3 SU (SEE PERMIT PAGE 5 OF 11, PARAGRAPH I.A.1.b.)					1/WEEK	GRAB
FECAL COLIFORM ^{1,4} (See footnote 4 for schedule)	*****	*****	200 cfu/100 ml	*****	400 cfu/100 ml	1/WEEK	GRAB
<i>E-Coli</i> ^{1,4} (See footnote 4 for schedule)	*****	*****	126 cfu/100 ml	*****	409 cfu/100 ml	1/WEEK	GRAB
TOTAL PHOSPHORUS (See Section E of this Permit)	Report mg/l	*****	Report mg/l	*****	Report mg/l	2/MONTH	24-HOUR ⁵ COMPOSITE
TOTAL PHOSPHORUS (See Section E of this Permit for schedule)	0.6 lbs/Day	*****	1.0 mg/l	*****	Report mg/l	2/MONTH	24-HOUR ⁵ COMPOSITE
WHOLE EFFLUENT TOXICITY ^{6, 7, 8}	Acute LC ₅₀ ≥ 50%					2/YEAR	24-HOUR ⁵ COMPOSITE

Footnotes:

1. Required for State Certification.
2. Report annual average, monthly average, and the maximum daily flow. The limit is an annual average, which shall be reported as a rolling average. The value will be calculated as the arithmetic mean of the monthly average flow for the reporting month and the monthly average flows of the previous eleven months.
3. All required effluent samples shall be collected at the point specified below. Any change in sampling location must be reviewed and approved in writing by EPA and MassDEP.

PARAMETER	SAMPLE LOCATION
FLOW	Influent Flow-Meter Manhole
pH RANGE	UV Weir Box
FECAL COLIFORM and E-COLI	UV Weir Box
TOTAL PHOSPHORUS	UV Weir Box
BOD ₅ and TSS	UV Weir Box
WHOLE EFFLUENT TOXICITY	Dilution Water: Boat House Dock
	Effluent: UV Weir Box

A routine sampling program shall be developed in which samples are taken at the same location, same time and same days of the week each month. Occasional deviations from the routine sampling program are allowed, but the reason for the deviation shall be documented in correspondence appended to the applicable discharge monitoring report.

All samples shall be tested using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136. All samples shall be 24 hour composites unless specified as a grab sample in 40 CFR §136.

4. The average monthly limits for fecal coliform and *E.coli* are expressed as geometric means. Fecal coliform sampling and *E. coli* sampling shall be done concurrently. **The fecal coliform limits and monitoring requirements shall end one year after the effective date of this permit. The *E. coli* limits shall go into effect one year after the effective date of this permit; the monitoring requirements go into effect upon the**

effective date of the permit.

5. 24-hour composite samples will consist of at least twenty four (24) grab samples taken during one consecutive 24 hour period.
6. The permittee shall conduct acute toxicity tests two times per year. The permittee shall test the daphnid, Ceriodaphnia dubia, only. Toxicity test samples shall be collected during the second week of the months of June and September. The results are due July 31, and October 31, respectively. The tests must be performed in accordance with test procedures and protocols specified in **Attachment A** of this permit.

Test Dates Second Week in	Submit Results By:	Test Species	Acute Limit LC ₅₀
June September	July 31 October 31	<u>Ceriodaphnia dubia</u> (daphnid)	≥ 50%

After submitting **one year** and a **minimum** of two consecutive sets of WET test results, all of which demonstrate compliance with the WET permit limits, the permittee may request a reduction in the WET testing requirements. The permittee is required to continue testing at the frequency specified in the permit until notice is received by certified mail from the EPA that the WET testing requirement has been changed.

7. The LC₅₀ is the concentration of effluent which causes mortality to 50% of the test organisms. Therefore, a 50% limit means that a sample of 50% effluent shall cause no more than a 50% mortality rate.
8. If toxicity test(s) using receiving water as diluent show the receiving water to be toxic or unreliable, the permittee shall either follow procedures outlined in **Attachment A (Toxicity Test Procedure and Protocol) Section IV., DILUTION WATER** in order to obtain an individual approval for use of an alternate dilution water, or the permittee shall follow the Self-Implementing Alternative Dilution Water Guidance which may be used to obtain automatic approval of an alternate dilution water, including the appropriate species for use with that water. This guidance is found in Attachment G of NPDES Program Instructions for the Discharge Monitoring Report Forms (DMRs) which is sent to all permittees with their annual set of DMRs and may also be found on the EPA,

Region I web site at <http://www.epa.gov/region1/enforcementandassistance/dmr2005.pdf>.

If this guidance is revoked, the permittee shall revert to obtaining individual approval as outlined in **Attachment A**. Any modification or revocation to this guidance will be transmitted to the permittees as part of the annual DMR instruction package. However, at any time, the permittee may choose to contact EPA-New England directly using the approach outlined in **Attachment A**.

Part I.A.1. (Continued)

- a. The discharge shall not cause a violation of the water quality standards of the receiving waters.
- b. The pH of the effluent shall not be less than 6.0 or greater than 8.3 at any time.
- c. The discharge shall not cause objectionable discoloration of the receiving waters.
- d. The effluent shall not contain a visible oil sheen, foam, or floating solids at any time.
- e. The results of sampling for any parameter done in accordance with EPA approved methods above its required frequency must also be reported.
- f. If the average annual flow in any calendar year exceeds 80 percent of the facility's design flow, the permittee shall submit a report to MassDEP by March 31 of the following calendar year describing its plans for further flow increases and describing how it will maintain compliance with the flow limit and all other effluent limitations and conditions. This report may be combined with the annual I/I summary report required in Section C.3., of this permit.

2. Toxics Control

- a. The permittee shall not discharge any pollutant or combination of pollutants in toxic amounts.
- b. Any toxic components of the effluent shall not result in any demonstrable harm to aquatic life or violate any state or federal water quality standard which has been or may be promulgated. Upon promulgation of any such standard, this permit may be revised or amended in accordance with such standards.

3. Numerical Effluent Limitations for Toxicants

EPA or MassDEP may use the results of the toxicity tests and chemical analyses conducted pursuant to this permit, as well as national water quality criteria developed pursuant to Section 304(a)(1) of the Clean Water Act (CWA), state water quality criteria, and any other appropriate information or data, to develop numerical effluent limitations for any pollutants, including but not limited to those pollutants listed in Appendix D of 40 CFR Part 122.

B. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfall(s) listed in Part I A.1. of this permit. Discharges of wastewater from any other point sources, including sanitary sewer overflows (SSOs), are not authorized by this permit and shall be reported in accordance with Section D.1.e. (1) of the General Requirements of this permit (Twenty-four hour reporting).

Notification of SSOs to MassDEP shall be made on its SSO Reporting Form (which includes DEP Regional Office telephone numbers). The reporting form and instruction for its completion may be found on-line at <http://www.mass.gov/dep/water/approvals/surffms.htm#sso>.

C. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM

Operation and maintenance of the sewer system shall be in compliance with the General Requirements of Part II and the following terms and conditions:

1. Maintenance Staff

The permittee shall provide an adequate staff to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this permit.

2. Preventative Maintenance Program

The permittee shall maintain an ongoing preventative maintenance program to prevent overflows and bypasses caused by malfunctions or failures of the sewer system infrastructure. The program shall include an inspection program designed to identify all potential and actual unauthorized discharges.

3. Infiltration/Inflow Control Plan:

The permittee shall maintain and implement a plan to control infiltration and inflow (I/I) to the separate sewer system. The plan shall be updated as necessary and shall describe the permittee's program for preventing infiltration/inflow related effluent limit violations, and all unauthorized discharges of wastewater, including overflows and by-passes due to excessive infiltration/inflow.

The plan shall include:

- An ongoing program to identify and remove sources of infiltration and inflow. The program shall include the necessary funding level and the source(s) of funding.
- An inflow identification and control program that focuses on the disconnection and redirection of illegal sump pumps and roof down spouts. Priority should be given to removal of inflow sources that are upstream from, and potentially contribute to, known areas of sewer system backups and/or overflow.
- Identification and prioritization of areas that will provide increased aquifer recharge as the result of reduction/elimination of infiltration and inflow to the system.
- An educational public outreach program for all aspects of I/I control, particularly inflow.

Reporting Requirements:

A summary report of all actions taken to minimize I/I during the previous calendar year shall be submitted to EPA and MassDEP annually, **by March 31**. The summary report shall, at a minimum, include:

- A map and a description of inspection and maintenance activities conducted and corrective actions taken during the previous year.
- Expenditures for any infiltration/inflow related maintenance activities and corrective actions taken during the previous year.
- A map with areas identified for I/I-related investigation/action in the coming year.
- A calculation of the annual average I/I and the maximum month I/I for the reporting year.

- A report of any infiltration/inflow related corrective actions taken as a result of unauthorized discharges reported pursuant to 314 CMR 3.19(20) and reported pursuant to the Unauthorized Discharges section of this permit.

4. Alternate Power Source

In order to maintain compliance with the terms and conditions of this permit, the permittee shall continue to provide an alternative power source with which to sufficiently operate its treatment works (as defined at 40 CFR §122.2).

D. SLUDGE CONDITIONS

1. The permittee shall comply with all existing federal and state laws and regulations that apply to sewage sludge use and disposal practices and with the CWA Section 405(d) technical standards.
2. The permittee shall comply with the more stringent of either the state or federal (40 CFR part 503), requirements.
3. The requirements and technical standards of 40 CFR Part 503 apply to facilities which perform one or more of the following use or disposal practices:
 - a. Land application - the use of sewage sludge to condition or fertilize the soil
 - b. Surface disposal - the placement of sewage sludge in a sludge-only landfill
 - c. Sewage sludge incineration in a sludge-only incinerator
4. The 40 CFR part 503 conditions do not apply to facilities which place sludge within a municipal solid waste landfill. These conditions also do not apply to facilities which do not dispose of sewage sludge during the life of the permit but rather treat the sludge (lagoons, reed beds), or are otherwise excluded under 40 CFR 503.6.

5. The permittee shall use and comply with the attached compliance guidance document to determine appropriate conditions. Appropriate conditions contain the following elements:

- General requirements
- Pollutant limitations
- Operational Standards (pathogen reduction requirements and vector attraction reduction requirements)
- Management practices
- Record keeping
- Monitoring
- Reporting

Depending upon the quality of material produced by a facility, all conditions may not apply to the facility.

6. The permittee shall monitor the pollutant concentrations, pathogen reduction and vector attraction reduction at the following frequency. This frequency is based upon the volume of sewage sludge generated at the facility in dry metric tons per year:

less than 290	1/ year
290 to less than 1500	1 /quarter
1500 to less than 15000	6 /year
15000 +	1 /month

7. The permittee shall sample the sewage sludge using the procedures detailed in 40 CFR 503.8.

8. The permittee shall submit an annual report containing the information specified in the guidance by **February 19**. Reports shall be submitted to the address contained in the reporting section of the permit. Sludge monitoring is not required by the permittee when the permittee is not responsible for the ultimate sludge disposal. The permittee must be assured that any third party contractor is in compliance with appropriate regulatory requirements. In such case, the permittee is required only to submit an annual report by **February 19** containing the following information:

- Name and address of contractor responsible for sludge disposal
- Quantity of sludge in dry metric tons removed from the facility by the sludge contractor

E. SCHEDULES OF COMPLIANCE

The total phosphorus limits shall go into effect **two (2) years from the effective date of this permit**. Thereafter, the limits shall be in effect. In the interim, the permittee shall monitor and report total phosphorus in accordance with the requirements of Part I.A.1.

No later than one (1) year from the effective date of this permit, the permittee shall complete plans and specifications for plant upgrades necessary to achieve the total phosphorus limitations. The design of the system shall include “scalable” technology to allow the facility to be readily modified to meet lower total phosphorus concentrations in the future, if necessary to meet water quality based effluent limitations. The permittee shall notify both EPA and MassDEP of completion of this requirement

No later than two (2) years from the effective date of this permit, the permittee shall complete construction and attain operation of plant upgrades necessary to achieve the final total phosphorus limitations. The permittee shall notify both EPA and MassDEP when the phosphorus removal system is in operation.

All notifications required herein, shall be made to all three addresses found in Section F. of this permit.

F. MONITORING AND REPORTING

1. Reporting

Monitoring results obtained during each calendar month shall be summarized and reported on Discharge Monitoring Report Form(s) postmarked no later than the 15th day of the following month.

Signed and dated originals of these, and all other reports required herein, shall be submitted to the Director and the State at the following addresses:

Environmental Protection Agency
Water Technical Unit (SEW)
P.O. Box 8127
Boston, Massachusetts 02114

The State Agency is:

Massachusetts Department of Environmental Protection
Central Regional Office - Bureau of Resource Protection
627 Main Street
Worcester, MA 01608

Signed and dated Discharge Monitoring Report Forms and toxicity test reports required by this permit shall also be submitted to the State at:

Massachusetts Department of Environmental Protection
Division of Watershed Management
Surface Water Discharge Permit Program
627 Main Street, 2nd Floor
Worcester, Massachusetts 01608

G. STATE PERMIT CONDITIONS

This Discharge Permit is issued jointly by the U. S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) under Federal and State law, respectively. As such, all the terms and conditions of this Permit are hereby incorporated into and constitute a discharge permit issued by the Commissioner of the MassDEP pursuant to M.G.L. Chapter. 21, §43.

Each Agency shall have the independent right to enforce the terms and conditions of this Permit. Any modification, suspension or revocation of this permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of this Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this Permit is declared, invalid, illegal or otherwise issued in violation of State law such permit shall remain in full force and effect under Federal law as an NPDES Permit issued by the U.S. Environmental Protection Agency. In the event this Permit is declared invalid, illegal or otherwise issued in violation of Federal law, this Permit shall remain in full force and effect under State law as a Permit issued by the Commonwealth of Massachusetts.